IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	BROWN ET AL.	Attorneys' Ref. P214009
Serial No.:	10/020,838	Art Unit: 2142
Filing Date:	12/10/2001	
Title:	SYSTEMS AND METHODS FOR GENERATING AND COMMUNICATING MOTION DATA THROUGH A DISTRIBUTED NETWORK	

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Sir:

In accordance with 37 CFR §1.56, the Applicant respectfully submits this Supplemental Information Disclosure Statement to call to the attention of the Examiner the references listed on the attached Forms PTO/SB/08A and PTO/SB/08B for consideration in the prosecution of the above-referenced application for U.S. patent.

Copies of the non-patent literature documents cited in this Information Disclosure Statement are enclosed. Citation of a reference in this Information Disclosure Statement is not an admission that the reference is prior art to the present invention.

It is believed that no fee is due at this time to maintain the application in full force and effect, however if any such fee is due please charge this to Deposit Account No. 502099.

REMARKS

I. U.S.PATENTS

U.S. Patent No. 6,518,980 to DeMotte et al. discloses a method of allowing a remote computer to communicate with a programmable controller for a robot. Display instructions are generated based on a type of a data object. A web page is dynamically generated as a function of requested data and display instructions.

U.S. Patent No. 5,291,416 to Hutchins discloses a system that automatically collects event data of a numerically controlled machine tool. The identity, data, and time of the actual occurrence of an event are stored in nonvolatile memory.

U.S. Patent No. 5,984,499 to Nourse et al. discloses a system for controlling multiple job streams for numerically controlling a machine tool. The system defines a pointer architecture including a vertical data system for facilitating communications between operations in the same job stream and a horizontal data system for facilitating communications between operations in different job streams.

U.S. Patent No. 5,400,345 to Ryan, Jr. discloses a control mode responsive to a communications bus. The control node comprises test logic for testing the node. The node processes a first class of messages related to predetermined functions and a second class of messages comprising signals for instructing the test logic to test the node.

U.S. Patent No. 6,133,867 to Eberwine et al. discloses a collision avoidance system for movable craft. Operation parameters such as position, velocity, and acceleration of each craft are determined. A controller on each craft generates data packets for storing the operation parameters are transmitted to a remote receiver. Each craft receives from the remote receiver operation parameters to allow collision avoidance potential to be calculated.

U.S. Patent No. 6,065,365 to Ostler et al. discloses a control lever assembly for converting a position of a linearly movable control lever into electrical signals.

U.S. Patent No. 5,368,484 to Copperman et al. discloses a system for simulating a vehicle. Based on input devices, a modeling system determines position information within a simulated environment. Feedback is provided to the user through the input device(s) and through a low frequency sound signal.

U.S. Patent No. 5,382,026 to Harvard et al. discloses system for simulating a shooting gallery comprising vehicles that traverse a track through a series of targets.

U.S. Patent No. 5,405,152 to Katanics et al. discloses a system comprising positioning means response to weight shift of a player. A physical response is fed back to the player when a virtual position of one player collides with a virtual position of another player.

U.S. Patent No. 5,766,077 by Hongo discloses a video game system in which characters on a computer video game are both displayed on a screen and represented by robots. The robots resemble and move in conjunction with the corresponding character on the screen. The movement of both screen and robot characters is controlled by a controller.

U.S. Patent No. 5,413,355 to Gonzalez discloses an educational toy in which a three-dimensional animated character is controlled to provide positive or negative feedback in response to correct or incorrect answers.

U.S. Patent No. 5,772,504 by Machiguchi discloses an arcade style driving simulator. A control unit coordinates movement decisions of a player's automobile and general automobiles on the course represented by the simulator. The movement decisions are based on a two-dimensional coordinate system, while the player controls the player's automobile on a three-dimensional coordinate system.

U.S. Patent No. 5,921,780 by Myers discloses a racecar simulator system that establishes wheel movement, chassis movement, and changes in G forces that are similar to those experienced by a racecar driver. The parameters of the system can be changed to accommodate different drivers and/or to simulate different racecars.

U.S. Patent No. 5,625,820 by Hermsmeier et al. discloses a system in which users may elect to decrease object recovery time at the expense of computer performance. Changes to objects are logged, and objects are rebuilt based on the logged changes and rebuild information.

U.S. Patent No. 5,704,837 by Iwasaki et al. discloses a steering system for a video game having first and second steering units and a steering information computing unit. The computing unit generates propulsion and rotation information based on first and second propulsion vectors generated by the steering units.

U.S. Patent No. 5,618,179 by Copperman et al. discloses a simulation system comprising vehicle control input devices and modeling software. The modeling software displays a present route of a simulated vehicle.

U.S. Patent No. 6,080,063 by Khosla discloses a game play system that allows remote players to participate in a live event. The system creates a concurrent simulation of the live event based on sensor inputs. The remote players interact with the concurrent simulation.

U.S. Patent No. 4,829,419 to Hyatt discloses a computer architecture that allows a machine to be controlled directly from the computer without intervening special purpose interface circuitry.

U.S. Patent No. 5,005,134 to Nakashima et al. discloses a numerical control apparatus that stores auxiliary function codes. Execution means for simultaneously executing functional instructions identifying auxiliary function numbers identifying the auxiliary function codes. The auxiliary function codes are updated in response to completion of the auxiliary functions.

U.S. Patent No. 5,802,365 by Kathail et al. discloses a method of configuring a particular device with a device driver. Available drivers are scanned for a name matching the device name. A family having category information that matches the driver is installed. The system attempts to install drivers with the particular device until the device is properly configured.

II. FOREIGN PATENTS

NO NEW FOREIGN PATENT REFERENCES.

III. NON-PATENT LITERATURE REFERENCES

"About CNC Controllers", by Anonymous discloses the basic operation of computer numerical control (CNC) controllers commonly used in industry.

"Intelligent Real-Time Control of Robotic Vehicles", by Payton, published August 1991, ACM.; discloses the concept of Intelligent Real Time Controllers (IRTC) and discusses an example of IRTC in the context of an Adaptive Suspension Vehicle.

"Integrated Architecture for Industrial Robot Programming and Control", by Nilsson et al., published December 31, 1999. This paper discloses a framework for robot control. This paper suggests using abstraction to enhance robot-programming capabilities. This paper recognizes the different levels of expertise of various users of robotics systems. This system employs layers of software that hopefully optimize flexibility and efficiency.

Kent Brown's "SOAP for Platform Neutral Interoperability" dated in the fall of 2000, describes the Simple Object Access Protocol (SOAP), which provides interoperability among distributed computing functions.

Pirjanian and Christensen's "Hierarchical Control for Navigation Using Heterogeneous Models", dated November 1, 1995, discloses a mobile autonomous robot device intended for use in a relatively unstructured environment. The robot device navigates the environment to perform a mission using "skills" that are not specific to the mission and "reacts" to obstructions in the environment using sensors.

Blasvaer and Pirjanian's "An Autonomous Mobile Robot System", published June 8, 1994, discloses a mobile autonomous robot device using a distributed navigation system. Chapter 4 of this reference discloses a software architecture of the navigation system that uses event based communications. Chapter 6, section 7, of this reference discloses a motion executor adapted to operate in a hardware independent fashion.

Stewart, Schmitz and Khosla's "Implementing Real-Time Robotic Systems Using CHIMERA II", published in 1990, discloses a software system for a motion control system

employing a layered hardware platform. The software system provides a communications layer and kernel that hide the complexities of specific communications and hardware implementations.

Paidy and Reeve's "Software Architecture for a Cell Controller", published in 1991, discloses a software architecture for facilitating the integration of manufacturing elements of a computer integrated manufacturing system. The software system comprises a number of software modules that handle order manipulation, scheduling, manufacturing, and support. A data acquisition system collects and stores data related to the manufacturing system.

CONCLUSION

The Applicant respectfully submits that these references, taken alone or in combination, neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to the pending application is respectfully requested. If there is any matter which could be expedited by consultation with the Applicant's attorney, such would be welcome. The Applicant's attorney can normally be reached at the telephone number below.

Signed at Bellingham, County of Whatcom, State of Washington, this 25th day of May, 2006.

Respectfully submitted,

BROWN ET AL.

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37 C.F.R. §1.8

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet	1	of	1

Complete If Known	
Application Number	10/020,838
Filing Date	12/10/2001
First Named Inventor	David W. Brown
Group Art Unit	2142
Examiner Name	Le, Hieu C.
Attorney Docket Number	P214009

U.S.PATENT DOCUMENTS

Examiner Initials*	Cite No.[2]	U.S.Patent Document Number	Kind Code[2]	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	4,829,419		Hyatt	05-09-1989	
	2	5,005,134		Nakashima et al.	04-02-1991	
	3	5,291,416		Hutchins	03-01-1994	
	4	5,368,484		Copperman et al.	11-29-1994	
	5	5,382,026		Harvard et al.	01-17-1995	
	6	5,400,345		Ryan, Jr.	03-21-1995	
	7	5,405,152		Katanics et al.	04-11-1995	
	8	5,413,355		Gonzalez	05-09-1995	
	9	5,618,179		Copperman et al.	04-08-1997	
	10	5,704,837		Iwasaki et al.	01-06-1998	
	11	5,766,077		Hongo	06-16-1998	
	12	5,772,504		Machiguchi	06-30-1998	
	13	5,802,365		Kathail et al.	09-01-1998	
	14	5,921,780		Myers	07-13-1999	
	15	5,984,499		Nourse et al.	11-16-1999	
	16	6,065,365		Ostler et al.	05-23-2000	
	17	6,080,063		Khosla	06-27-2000	
	18	6,133,867		Eberwine et al.	10-17-2000	
	19	5,625,820		Hermsmeier et al.	04-29-1997	
	20	6,518,980		DeMotte et al.	02-11-2003	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

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[1]Unique citation designation number[2]See attached Kinds of U.S. Patent Documents[3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3) [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible [6]Applicant is to place a check mark here if English language Translation is attached.

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First Named Inventor	David W. Brown
Group Art Unit	2142
Examiner Name	Le, Hieu C.
Attorney Docket Number	P214009

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	1	STEWART, SCHMITZ, KHOSLA; "Implementing Real-Time Robotic Systems Using CHIMERA II", IEEE, 1990, pp. 254-255, Sections 3.1 and 3.2	
	2	PAIDY, REEVE; "Software Architecture for a Cell Controller", IEEE, 1991, pp. 344-349	
	3	PAYTON, D. , BIHARI, T.; "Intelligent Real-Time Control of Robotic Vehicles", ACM, 8/1/1991, pp. 49-63, Volume 34, No. B.	
	4	BLASVAER, PIRJANIAN; "An Autonomous Mobile Robot System", 6/8/1994, pp 52-61 and 122-124, Chapters 4 and 6.7	
	5	PIRJANIAN, CHRISTENSEN; "Hierarchical Control for Navigation Using Heterogeneous Models", 11/1/1995, 19 pages, Denmark.	
	6	GLOBALSPEC; "About CNC Controllers", 1999, INTERNET LOCATION: http://motion-controls.globalspec.com/LearnMore/Motion_Controls/Machine_Motion_Controllers/CNC_Controllers	
	7	NILSSON, K. , JOHANSSON, R.; "Integrated Architecture for Industrial Robot Programming and Control", Elsevier Science Publishers B.V, 5/20/1999, Robotics and Autonomous Systems, pp. 205-226, Volume 29	
	8	BROWN, K.; "SOAP for Platform Neutral Interoperability", 9/1/2000, 16 pages.	

Examiner Signature		Date Considered	

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